

## SECTION IV.—RIVERS AND FLOODS.

### RIVERS AND FLOODS, OCTOBER, 1916.

By ALFRED J. HENRY, Professor in Charge.

[Dated: Weather Bureau, Washington, Dec. 2, 1916.]

Flood stages were not reached at any of the river stations of the bureau during the month of October, 1916, and there were practically no floods in the previous month, thus making a record of the absence of flood conditions which, so far as known, is quite unusual. In a region as large as the United States it rarely happens that neither local nor general rains are sufficient to produce floods, at least in some portions of the country, for so long a period. In this connection it is interesting to inspect the charts of the total precipitation for the two months in question. These charts point to the reason for an absence of floods in any part of the country.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

### MEAN LAKE LEVELS DURING OCTOBER, 1916.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., Nov. 4, 1916.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes.			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during October, 1916:				
Above mean sea level at New York.....	<i>Fect.</i> 603.72	<i>Fect.</i> 580.56	<i>Fect.</i> 571.90	<i>Fect.</i> 246.06
Above or below—				
Mean stage of September, 1916.....	—0.16	—0.20	—0.43	—0.63
Mean stage of October, 1915.....	+0.99	+0.78	—0.07	+0.89
Average stage for October, last 10 years.....	+1.12	+0.13	—0.20	+0.32
Highest recorded October stage.....	+0.16	—2.38	—1.80	—1.75
Lowest recorded October stage.....	+2.14	+0.96	+1.10	+2.39
Average relation of the October level to—				
September level.....	0.0	—0.2	—0.2	—0.4
November level.....	+0.2	+0.3	+0.3	+0.2